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10/698,769	10/31/2003	Jerry Rolia	200300266-1	1824	
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Intellectual Property Administration ZHI 3404 E. Harmony Road				MENG YAO	
Mail Stop 35	ny Koau		ART UNIT	PAPER NUMBER	
FORT COLLIN	IS, CO 80528		2195		
			NOTIFICATION DATE	DELIVERY MODE	
			12/22/2010	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)	
	10/698,769	ROLIA ET AL.	
Office Action Summary	Examiner	Art Unit	
	MENGYAO ZHE	2195	
The MAILING DATE of this communication a Period for Reply	ppears on the cover sheet w	ith the correspondence add	ress
A SHORTENED STATUTORY PERIOD FOR REPWHICHEVER IS LONGER, FROM THE MAILING - Extensions of time may be available under the provisions of 37 CFR after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory periods to reply within the set or extended period for reply will, by state Any reply received by the Office later than three months after the main earned patent term adjustment. See 37 CFR 1.704(b).	DATE OF THIS COMMUNI 1.136(a). In no event, however, may a od will apply and will expire SIX (6) MOI ute, cause the application to become A	CATION. reply be timely filed NTHS from the mailing date of this com BANDONED (35 U.S.C. § 133).	
Status			
1) ☐ Responsive to communication(s) filed on 21 2a) ☐ This action is FINAL . 2b) ☐ The 3) ☐ Since this application is in condition for allow closed in accordance with the practice under	nis action is non-final. vance except for formal mat	·	merits is
Disposition of Claims			
4) ☐ Claim(s) 1-27 is/are pending in the application 4a) Of the above claim(s) is/are withdrest is/are allowed. 5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) 1,2,5-15 and 18-27 is/are rejected. 7) ☐ Claim(s) 3,4,16 and 17 is/are objected to. 8) ☐ Claim(s) are subject to restriction and application Papers	rawn from consideration.		
9) The specification is objected to by the Examination The drawing(s) filed on is/are: a) and an applicant may not request that any objection to the Replacement drawing sheet(s) including the correction. 11) The oath or declaration is objected to by the	ccepted or b) objected to ne drawing(s) be held in abeya ection is required if the drawing	nce. See 37 CFR 1.85(a). g(s) is objected to. See 37 CFR	, ,
Priority under 35 U.S.C. § 119			
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of: 1. Certified copies of the priority docume 2. Certified copies of the priority docume 3. Copies of the certified copies of the priority docume application from the International Bure * See the attached detailed Office action for a limit	ents have been received. ents have been received in A riority documents have beer eau (PCT Rule 17.2(a)).	Application No received in this National S	tage
Attachment(s) 1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No	Summary (PTO-413) s)/Mail Date	
Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date	6) Other:	Informal Patent Application	

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DETAILED ACTION

1. Claims 1-27 are presented for examination.

2. In view of the Appeal Brief filed on 9/21/2010, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below. To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid. A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below.

Allowable Subject Matter

3. Claims 3-4, 16-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 1. Claims 1, 14, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bozak et al., Pub. No. 2005/0027864 (hereafter Bozak) in view of Brelin, Patent No. 6,647,448 (hereafter Brelin) further in view of O'Conner et al., Pub. No. 2003/0056126 (hereafter O'Conner).
- 4. As per claims 1, 27, Bozak teaches a method of governing access to resources in a computing utility facility, comprising:

receiving a demand profile associated with an application that identifies the resources required from a pool of resources in the computing utility facility during one or more demand cycles (Para 27, 30, 34: grid corresponds to the utility facility; one request corresponds to a demand cycle that ends when the resource is deallocated);

admitting an application to the computing utility facility if resources required for the application can be provided from the pool of resources in accordance with the demand profile and associated one or more demand cycles (Para 35, 37);

assigning available resources from the pool of resources in response to a request from the applications admitted to the computing utility facility (Para 37);

Bozak does not specifically teach unfolding the one or more demand cycles from the demand profile associated with the application into time slots requiring resources from the pool of resources; and wherein the amount of resources required from the pool of resources by the application varies across each of the time slots such that assignment of resources is tailored to varying demand across each of the time slots.

However, Brelin teaches wherein admitting the application further comprises: unfolding the one or more demand cycles from the demand profile associated with the application into time slots requiring resources from the pool of resources (Column 6, line 65-Column 7, line 7; Column 7, lines 8-18) for the purpose of allowing the system to maintain and update the scheduling calendar to reflect changes in the system.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to modify the teachings for Bozak with wherein admitting the application further comprises: unfolding the one or more demand cycles from the demand profile associated with the application into time slots requiring resources from the pool of resources, as taught by Berlin, because it allows the system to maintain and update the scheduling calendar to reflect changes in the system.

Brelin does not specifically teach wherein the amount of resources required from the pool of resources by the application varies across each of the time slots such that assignment of resources is tailored to varying demand across each of the time slots. However, Brelin does teach that many different requests may be filed by an application (Fig 4: note that the posting device may post n different requests) and that each request may demand for resource units (Column 8, lines 22-30).

Since Brelin does not restrict his requests from each application to be the same requests, it would have been obvious to one having ordinary skill in the art at the time of the applicant's invention that in the case where each request made by the application require different resource units at different time slots, one would result in a situation as claimed by the applicant—wherein the amount of resources required from the pool of resources by the application varies across each of the time slots such that assignment of resources is tailored to varying demand across each of the time slots (i.e. at time slot 1, the application wants subunits A and B; next time slot, it wants subunits A, B and C).

Moreover, as a further proof to the fact that resource demand may vary across each time slot, O'Connor teaches that resource demands will vary across each time slot/period for the purpose of meeting dynamic needs of the system (Abstract; Para 10, 32).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to modify the teachings of Bozak in view of Brelin with the specifics of wherein the amount of resources required from the pool of resources by the application varies across each of the time slots such that assignment of resources is tailored to varying demand across each of the time slots, as taught by O'Connor, because it helps to meet the dynamic needs of the system.

- 5. As per claim 14, Bozak further teaches wherein the demand profile associated with an application is created through data collection or statistical estimation (Para 30).
- 2. Claims 1, 14, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eytchison, Patent No. 6,363,434 (hereafter Eytchison) in view of Brelin, Patent No. 6,647,448 (hereafter Brelin) further in view of O'Conner et al., Pub. No. 2003/0056126 (hereafter O'Conner).
- 6. As per claims 1, 27, Eytchison teaches a method of governing access to resources in a computing utility facility, comprising:

receiving a demand profile associated with an application that identifies the resources required from a pool of resources in the computing utility facility during one or more demand cycles (Column 6, lines 55-60; Column 8, lines 48-52);

admitting an application to the computing utility facility if resources required for the application can be provided from the pool of resources in accordance with the demand profile and associated one or more demand cycles (Column 7, lines 1-11);

assigning available resources from the pool of resources in response to a request from the applications admitted to the computing utility facility (Column 8, lines 35-39);

Eytchison does not specifically teach unfolding the one or more demand cycles from the demand profile associated with the application into time slots requiring

resources from the pool of resources; and wherein the amount of resources required from the pool of resources by the application varies across each of the time slots such that assignment of resources is tailored to varying demand across each of the time slots.

However, Brelin teaches wherein admitting the application further comprises: unfolding the one or more demand cycles from the demand profile associated with the application into time slots requiring resources from the pool of resources (Column 6, line 65-Column 7, line 7; Column 7, lines 8-18) for the purpose of allowing the system to maintain and update the scheduling calendar to reflect changes in the system.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to modify the teachings for Eytchison with wherein admitting the application further comprises: unfolding the one or more demand cycles from the demand profile associated with the application into time slots requiring resources from the pool of resources, as taught by Berlin, because it allows the system to maintain and update the scheduling calendar to reflect changes in the system.

Brelin does not specifically teach wherein the amount of resources required from the pool of resources by the application varies across each of the time slots such that assignment of resources is tailored to varying demand across each of the time slots.

However, Brelin does teach that many different requests may be filed by an application (Fig 4: note that the posting device may post n different requests) and that each request may demand for resource units (Column 8, lines 22-30).

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Since Brelin does not restrict his requests from each application to be the same requests, it would have been obvious to one having ordinary skill in the art at the time of the applicant's invention that in the case where each request made by the application require different resource units at different time slots, one would result in a situation as claimed by the applicant—wherein the amount of resources required from the pool of resources by the application varies across each of the time slots such that assignment of resources is tailored to varying demand across each of the time slots (i.e. at time slot 1, the application wants subunits A and B; next time slot, it wants subunits A, B and C).

Moreover, as a further proof to the fact that resource demand may vary across each time slot, O'Connor teaches that resource demands will vary across each time slot/period for the purpose of meeting dynamic needs of the system (Abstract; Para 10, 32).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to modify the teachings of Eytchison in view of Brelin with the specifics of wherein the amount of resources required from the pool of resources by the application varies across each of the time slots such that assignment of resources is tailored to varying demand across each of the time slots, as taught by O'Connor, because it helps to meet the dynamic needs of the system.

7. As per claim 14, Etchytson further teaches wherein the demand profile associated with an application is created through data collection or statistical estimation (Column 6, lines 56-59; Column 7, lines 45-57; Column 9, lines 25-35, lines 60-65).

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3. Claims 1- 2, 5-6, 8-13, 15, 18-19, 21-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clohessy et al., Patent No. 7,334,228 (hereafter Clohessy) in view of Brelin, Patent No. 6,647,448 (hereafter Brelin) further in view of O'Conner et al., Pub. No. 2003/0056126 (hereafter O'Conner) further in view of Bozak et al., Pub. No. 2005/0027864 (hereafter Bozak).

- 4. Clohessy, Brelin and Clohessy were cited in the previous office action.
- 8. As per claims 1, 27, Clohessy teaches a method of governing access to resources in a computing utility facility, comprising:

receiving a demand profile associated with an application that identifies the resources required from a pool of resources in the computing system during one or more demand cycles (Column 5, lines 25-30);

admitting an application to the computing utility facility if resources required for the application can be provided from the pool of resources in accordance with the demand profile and associated one or more demand cycles (Fig 4, unit 10, 114; Column 6, lines 2-15);

assigning available resources from the pool of resources in response to a request from the applications admitted to the computing utility facility (Column 13, lines 64-67; Column 14, lines 40-45);

Clohessy does not specifically teach unfolding the one or more demand cycles from the demand profile associated with the application into time slots requiring resources from the pool of resources; and wherein the amount of resources required from the pool of resources by the application varies across each of the time slots such that assignment of resources is tailored to varying demand across each of the time slots.

However, Brelin teaches wherein admitting the application further comprises: unfolding the one or more demand cycles from the demand profile associated with the application into time slots requiring resources from the pool of resources (Column 6, line 65-Column 7, line 7; Column 7, lines 8-18) for the purpose of allowing the system to maintain and update the scheduling calendar to reflect changes in the system.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to modify the teachings for Clohessy with wherein admitting the application further comprises: unfolding the one or more demand cycles from the demand profile associated with the application into time slots requiring resources from the pool of resources, as taught by Berlin, because it allows the system to maintain and update the scheduling calendar to reflect changes in the system.

Brelin does not specifically teach wherein the amount of resources required from the pool of resources by the application varies across each of the time slots such that assignment of resources is tailored to varying demand across each of the time slots.

However, Brelin does teach that many different requests may be filed by an application (Fig 4: note that the posting device may post n different requests) and that each request may demand for resource units (Column 8, lines 22-30).

Since Brelin does not restrict his requests from each application to be the same requests, it would have been obvious to one having ordinary skill in the art at the time of the applicant's invention that in the case where each request made by the application require different resource units at different time slots, one would result in a situation as claimed by the applicant—wherein the amount of resources required from the pool of resources by the application varies across each of the time slots such that assignment of resources is tailored to varying demand across each of the time slots (i.e. at time slot 1, the application wants subunits A and B; next time slot, it wants subunits A, B and C).

Moreover, as a further proof to the fact that resource demand may vary across each time slot, O'Connor teaches that resource demands will vary across each time slot/period for the purpose of meeting dynamic needs of the system (Abstract; Para 10, 32).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to modify the teachings of Clohessy in view of Brelin with the specifics of wherein the amount of resources required from the pool of resources by the application varies across each of the time slots such that assignment of resources is tailored to varying demand across each of the time slots, as taught by O'Connor, because it helps to meet the dynamic needs of the system.

Clohessy in view of Brelin further in view of O'Connor does not specifically teach that the application are requesting for resources in a computing utility facility. However Bozak teaches a computing utility facility where applications are admitted into the grid system when resources are available for the purpose of sharing resources across the network (Para 34-35).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to modify the teachings of Clohessy with the specifics of he application are requesting for resources in a computing utility facility, as taught by Bozak, such that the resources may be shared across the network.

9. As per claim 14, Clohessy teaches an apparatus for governing access to resources in a computing utility facility comprising:

A processor capable of executing instructions (Fig 2B, unit 18);

A memory containing instructions when executed cause the processor to receive a demand profile associated with an application that identifies the resources required from a pool of resources in the computing utility facility during one or more demand cycles, admit an application to the computing utility facility if the resources required for

the application can be provided from the pool of resources in accordance with the demand profile and associated one or more demand cycles; and assign available resources from the pool of resources in response to a request from the applications admitted to the computing utility facility (Fig 4, unit 10, 114; Column 6, lines 2-15; Column 13, lines 64-67; Column 14, lines 40-45); and

Wherein the demand profile associated with an application is created through data collection or statistical estimation (Column 5, lines 29-35).

Clohessy does not specifically teach unfolding the one or more demand cycles from the demand profile associated with the application into time slots requiring resources from the pool of resources; and wherein the amount of resources required from the pool of resources by the application varies across each of the time slots such that assignment of resources is tailored to varying demand across each of the time slots.

However, Brelin teaches wherein admitting the application further comprises: unfolding the one or more demand cycles from the demand profile associated with the application into time slots requiring resources from the pool of resources (Column 6, line 65-Column 7, line 7; Column 7, lines 8-18) for the purpose of allowing the system to maintain and update the scheduling calendar to reflect changes in the system.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to modify the teachings for Clohessy with wherein admitting the application further comprises: unfolding the one or more demand cycles from the demand profile associated with the application into time slots requiring resources from the pool of resources, as taught by Berlin, because it allows the system to maintain and update the scheduling calendar to reflect changes in the system.

Brelin does not specifically teach wherein the amount of resources required from the pool of resources by the application varies across each of the time slots such that assignment of resources is tailored to varying demand across each of the time slots.

However, Brelin does teach that many different requests may be filed by an application (Fig 4: note that the posting device may post n different requests) and that each request may demand for resource units (Column 8, lines 22-30).

Since Brelin does not restrict his requests from each application to be the same requests, it would have been obvious to one having ordinary skill in the art at the time of the applicant's invention that in the case where each request made by the application require different resource units at different time slots, one would result in a situation as claimed by the applicant—wherein the amount of resources required from the pool of resources by the application varies across each of the time slots such that assignment of resources is tailored to varying demand across each of the time slots (i.e. at time slot 1, the application wants subunits A and B; next time slot, it wants subunits A, B and C).

Moreover, as a further proof to the fact that resource demand may vary across each time slot, O'Connor teaches that resource demands will vary across each time slot/period for the purpose of meeting dynamic needs of the system (Abstract; Para 10, 32).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to modify the teachings of Clohessy in view of Brelin with the specifics of wherein the amount of resources required from the pool of resources by the application varies across each of the time slots such that assignment of resources is tailored to varying demand across each of the time slots, as taught by O'Connor, because it helps to meet the dynamic needs of the system.

Clohessy in view of Brelin further in view of O'Connor does not specifically teach that the application are requesting for resources in a computing utility facility. However Bozak teaches a computing utility facility where applications are admitted into the grid system when resources are available for the purpose of sharing resources across the network (Para 34-35).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to modify the teachings of Clohessy with the specifics of he application are requesting for resources in a computing utility facility, as taught by Bozak, such that the resources may be shared across the network.

10. As per claims 2, 15, Brelin teaches comparing the time slots requiring resources with a staging calendar of time slots representing availability of resources in the pool of resources (Column 6, lines 5-10; Column 8, lines 5-20; Column 9, lines 53-56); and converting time slots from the staging calendar to a permanent calendar when comparison indicates the time slots requiring resources from the demand profile are

available for assignment (Column 9, lines 53-56) for the purpose of allowing the system to maintain and update the scheduling calendar to reflect changes in the system.

- 5. As per claims 5, 18, Brelin teaches wherein unfolding the one or more demand cycles includes a demand cycle describing a demand for resources from a resource pool during weekdays and another demand cycle describing another demand for resources during weekends (Column 7, lines 20-32).
- 11. As per claims 6, 19, Brelin teaches wherein converting time slots from the staging calendar to a permanent calendar comprises: copying the time slots from the staging calendar to the permanent calendar; and preallocating the requested resources from the pool of resources according to the permanent calendar schedule (Column 8, lines 10-20, lines 25-40: each most recently updated calendar corresponds to the permanent calendar; Fig 9, unit 95).
- 6. As per claims 8, 21, Brelin teaches policing requests for resources from the admitted applications to determine if the resources being requested are within an acceptable range (Column 10, lines 5-10, lines 36-50).
- 7. As per claims 9, 22, Brelin teaches intercepting a request for resources from an application admitted to access a pool of resources (Fig 9, unit 91); determining if resource request is within an acceptable range of demands based upon the demand profile of the application (Fig 9, unit 93); indicating an application is not entitled to the request when the determination indicates the request is outside the acceptable range of demands (Fig 9, unit 90); and indicating an application is entitled to the request when

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the determination indicates an application is within the acceptable range of demands (Fig 9, unit 97).

- 8. As per claims 10, 23, Brelin teaches arbitrating the allocation of limited resources between two or more applications entitled to receive the requested resources (Column 8, lines 60-67).
- 9. As per claims 11, 24, Brelin teaches wherein the arbitration comprises: detecting a conflict in providing requested resources to two or more admitted applications entitled to receive the requested resources; determining if at least one application can forego receiving the requested resources causing the conflict for a predetermined period of time; instructing the at least one application to forego receipt of the requested resources for a period of time in accordance with the determination; allocating resources to the remaining admitted applications entitled to receive the requested resources in accordance with a priority scheme (Column 8, lines 60-67).
- 10. As per claims 12, 25, Brelin teaches wherein the priority scheme includes selecting admitted applications to receive the requested resources on a first-come-first-serve basis (Column 8, lines 60-67).
- 11. As per claims 13, 26, Brelin teaches wherein the priority scheme includes selecting admitted applications to receive the requested resources in according to economic and class of services factors (Column 7, lines 15-32; Column 9, lines 50-55).

12. Claims 7, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clohessy et al., Patent No. 7,334,228 (hereafter Clohessy) in view of Brelin, Patent No. 6,647,448 (hereafter Brelin) further in view of O'Conner et al., Pub. No. 2003/0056126 (hereafter O'Conner) further in view of Bozak et al., Pub. No. 2005/0027864 (hereafter Bozak) further in view of Contestabile, Patent No. 7,123,141 (hereafter Contestabile).

- 13. Contestabile was cited in the previous office action.
- 14. As per claims 7, 20, Brelin does not specifically teach wherein converting time slots from the staging calendar to a permanent calendar comprises: indicating the time slots in the staging calendar associated with the requested resources are permanent and not for staging purposes; and pre-allocating the requested resources from the pool of resources according to the permanent calendar schedule.

However, Contestabile teaches converting temporary calendars into permanent calendars for the purpose of making changes permanent (Column 18, line 66-Column 19, line 18).

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to modify the teachings of Brelin with converting temporary calendars into permanent calendars for the purpose of making changes permanent, as taught by Contestabile, such that it is possible to indicate the time slots in the staging calendar associated with the requested resources are permanent and not for staging purposes; and pre-allocating the requested resources from the pool of resources

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according to the permanent calendar schedule, because it allows to one to make permanent changes to the calendar.

Response to Arguments

- 12. Applicant's arguments filed on 9/25/2010 have been fully considered but are not persuasive.
- 13. In the remark, the applicant argued that:
 - i) Clohessy does not teach pool of resources
 - ii) Clohessy does not teach that it identifies the resource required from a pool of resources in the computing utility facility during one or more demand cycles
 - iii) Clohessy does not teach that it admits an application to the computing utility facility
 - iv) combination of references does not teach unfolding demand cycles from the demand profile associated with the application into time slots requiring resources from the pool of resources
 - v) the demand of application varies across each of the time slots such that assignment of resources is tailored to varying demand across each of the time slots.
- 14. The Examiner respectfully disagree with the applicant. As to point:
 - i) Clohessy teaches a pool of resources, he calls it runtime resources that includes threads and sockets (Col 4, lines 33-53)

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ii) Clohessy does teaches that application will request for resources using a resource description list (RDL). Each demand submitted by the application corresponds to a demand cycle (Column 5, lines 25-34).

- iii) Clohessy also teaches that once the system has determined that there is enough resources to run the application according to the application's RDL, it will go ahead to load the application components and allow it to run (Col 6, lines 1-10).
- iv) The Examiner admitted that there is no time slots/calendars in Clohessy. But Brelin does teach submitting resource requests to a system. If the system decides that it can accommodate the request, it will reserve a slot for the requestor in its calendar. The demand profile corresponds to Brelin's resource request. The demand cycle corresponds to Brelin's repeat information. The time slots correspond to Brelin's calendar entry blocks such as block 52, 57. Brelin takes the resource request and puts the request information into its resource schedule entry (corresponding to the calendar). Fig 4, 5 and Col 6, line 46-Col 7, line 7
- v) Please see rejection above for why it would be obvious that the demand would vary across the scheduling entry/slot in Brelin. However, as a more concrete example as a proof, in O'Connor, Fig 4, each decision period (unit 70) corresponds to a time slot and the current demand for the resource may change at each decision period.

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Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MENGYAO ZHE whose telephone number is (571)272-6946. The examiner can normally be reached on Monday Through Friday, 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/

Supervisory Patent Examiner, Art Unit 2195